REMARKS

Claims 1-10, 12 and 18-22 are pending.

The amendments are supported by the original disclosure and, thus, no new matter has been added. If the Examiner should disagree, however, it is respectfully that the challenged limitation be pointed out with particularity in the next Action so support may be cited in response.

35 U.S.C. 112 – Definiteness

Claims 6-7 were rejected under Section 112, second paragraph, as being allegedly "indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." Applicants traverse because "the specific amino acids" of the framework of the heavy or light chain of mouse antibody are clear to one of ordinary skill in the art from positions numbered according to the Kabat system and Fig. 1 or Fig. 2, respectively. A unique amino acid exists at each of those positions of the mouse C11 antibody and it corresponds to the unique amino acid required.

Applicants request withdrawal of the Section 112, second paragraph, rejection because the pending claims are clear and definite.

35 U.S.C. 112 – Enablement

The Patent Office has the initial burden to question the enablement provided for the claimed invention. M.P.E.P. § 2164.04, and the cases cited therein. It is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain why it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. *In re Marzocchi*, 169 USPQ 367, 370 (C.C.P.A. 1971). Specific technical reasons are always required. See M.P.E.P. § 2164.04.

Claims 1-10, 12 and 18-19 were rejected under Section 112, first paragraph. Applicants traverse.

Claims 1 and 8-9 have been amended to clarify that the antibody binds to CD23. Claims 3 and 21-22 are directed to an antibody which competitively inhibits (i.e., inhibitory antibodies) the binding of an antibody which binds to CD23. Claim 20 is directed to a method of selecting inhibitory antibodies. Given CD23-specific antibodies, methods for generating anti-CD23 antibodies and inhibitory antibodies, and binding assays which are disclosed by Applicants in their specification, it would not require undue experimentation to generate the antibodies of claims 3 and 21-22. CD23 antigen would be used to identify other CD23-specific antibodies (i.e., candidate inhibitory antibodies), these other CD23-specific antibodies would be added to a binding assay with C11 antibody (or any of the variant antibodies based on the amino acid sequences of C11 CDRs), and those which competitively inhibited binding between C11 and CD23 would be selected as inhibitory antibodies. In particular, a person of skill in the art has no need a priori to know the structure or amino acid sequences of CDRs of such inhibitory antibodies. The skilled artisan would simply screen a library of antibodies for one that "competitively inhibits" binding to CD23. In no way can such a procedure be considered an undue burden. The claimed inhibitory antibodies are defined by a combination of structural and functional characteristics.

As noted above, the amino acids at each of the positions recited in claims 6-7 are clear by reference to Figs. 1-2. These amino acids are not "undisclosed" as alleged on page 7 of the Action because a unique amino acid is found at each position of the mouse C11 antibody.

Claims 12 and 18-19 are directed to treatment or prophylaxis using an anti-CD23 antibody. The disorders listed in claim 12 are related to inflammation and other immune system defects. This is consistent with the art-known role of CD23 in such disorders, see the art already of record at page 4, line 55, et seq. of EP 0788513 and column 38, line 43, et seq. of U.S. Patent 6,011,138. In particular, CD23 is implicated in arthritis, see Plater-Zyberk et al. (Nat. Med. 1:781-785, 1995) which is already of record and subsequently confirmed by Kleinau et al. (J. Immunol. 162:4266-4270, 1999) which is submitted herewith. The Action provides no evidence or reasoning which is inconsistent

with the teaching on page 14 of Applicants' specification that the specific anti-CD23 antibodies claimed here would be useful in the treatment or prophylaxis of the disorders listed in claim 12. Antibodies of the claimed invention can be used to block the function of cell surface or soluble CD23 (e.g., mediation of cell adhesion, regulation of IgE and histamine release, rescue of B cells from apoptosis and regulation of myeloid growth) such that the disorders recited in claim 12 are treated or prevented. Other methods of blocking CD23 function are taught on page 13, lines 10-22, of Applicants' specification.

As noted in Applicants' previous response, Section 112 and case law do not require in vivo working examples to enable these claims because it would not require undue experimentation to show that an anti-CD23 antibody is effective in treatment or prophylaxis. No fact or law was cited in the Action to contradict Applicants' teaching. Therefore, if this rejection is maintained, the Patent Office is requested to provide evidence as required by *Marzocchi* that anti-CD23 antibody would not have therapeutic or prophylactic effect when administered to patients afflicted with the recited disorders.

Abaza et al., Ngo et al., and Kuby et al. are not relevant to Applicants' claims because the amino acid sequences recited in those claims are specific and they have been shown to be involved in binding of CD23 or antibody function. Van Noort et al. is concerned with induction of disease by various antigens; it discloses nothing relevant to the effectiveness of anti-CD23 antibody in treating or preventing disease. A working example is not required when no evidence has been presented to contradict Applicants' teaching that the anti-CD23 antibodies claimed here can be used in treatment or prophylaxis of the listed disorders. Couzin, Bodey et al., and Spitler et al. also disclosed nothing relevant to use of anti-CD23 antibody in treatment or prophylaxis. The latter two references' discussion of cancer vaccines disregards the success of several antibodies in treating cancer. No evidence was presented that anti-CD23 antibodies would not be effective in treatment or prophylaxis of the disorders listed in claim 12.

Withdrawal of the enablement rejection made under Section 112, first paragraph, is requested because it would not require undue experimentation for a person of skill in the art to make and use the claimed invention.

35 U.S.C. 112 – Written Description

The specification must convey with reasonable clarity to persons skilled in the art that applicant was in possession of the claimed invention as of the filing date sought. See *Vas-Cath v. Mahurkar*, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). But the Patent Office has the initial burden of presenting evidence or a reason why persons of ordinary skill in the art would not have recognized such a description of the claimed invention in the original disclosure. See *In re Gosteli*, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989).

Claims 1-10, 12 and 18-19 were rejected under Section 112, first paragraph, because it was alleged that they contain "subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention." Applicants traverse because the specification teaches a representative number of species within the claimed genus. Antibody C11 and variant antibodies made from the amino acid sequences of CDRs from C11 (chimeric and humanized antibodies) are sufficient to provide a written description of the pending claims. More antibodies within the scope of the claims would be known to a person of skill in the art using Applicants' disclosure because constant or framework regions for other antibodies are known in the art. Thus, Applicants' variable region combined with an art-known constant region or CDRs grafted to art-known framework regions are also representative of the claimed genus as taught on pages 2-3 of the specification. Many of the antibodies within the scope of claim 1 would satisfy the requirements of claim 3. The amino acids at each of the positions recited in claims 6-7 are clear to the skilled artisan by reference to Figs. 1-2. These amino acids are not "undisclosed" as alleged on page 13 of the Action because a unique amino acid is found at each position of the mouse C11 antibody.

Withdrawal of the written description rejection made under Section 112, first paragraph, is requested because the specification conveys to a person skilled in the art that Applicants were in possession of the claimed invention as of the filing date.

Conclusion

Having fully responded to all of the pending objections and rejections contained in the Office Action (Paper No. 12292003), Applicants submit that the claims are in condition for allowance and earnestly solicit an early Notice to that effect. The Examiner is invited to contact the undersigned if any further information is required.

Respectfully submitted,

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